National Institute of Environmental Health Sciences

An overview of Chagas disease and the role of triatomines on its distribution in Brazil

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Abstract:

Chagas disease is caused by the parasitic protozoan Trypanosoma cruzi and affects about 15 million people in the Americas. In the Brazilian Amazon Basin, the disease is enzootic, with bugs from the genus Rhodnius serving as the main vectors, while in the northeastern region, mainly the genus Triatoma is naturally infected with T. cruzi. Oral infections appear sporadically in some regions of Brazil. Even though the illness is typically present in Latin America, autochthonous cases have been reported in the United States, mainly in the south of the country. The Triatominae subfamily comprises a large number of insect species that are potential vectors of Chagas disease. Triatomines are hematophagous insects, ingesting blood in all life stages. Since the insects play an important role in parasite selection, they also influence the geographical distribution of T. cruzi. The globalization process is one of the most important elements influencing the outcome of Chagas diseases in Brazil. This article outlines the status of reemerging Chagas disease in different regions of Brazil, the distribution of its vectors, and the consequences of global climate changes with respect to interactions of the pathogen with triatomines.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Central/South America

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Fly-borne Disease

Fly-borne Disease: Trypanosomiasis

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified